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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,800	07/22/2003	Richard G. Plank JR.	PLAR 101	9024

7590 02/21/2007  
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EXAMINER
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OMOTOSHO, EMMANUEL

ART UNIT	PAPER NUMBER
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3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/625,800	PLANK, RICHARD G.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Emmanuel Omotosho	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otten et al. (US Patent No. 6821211) in view of Ogawa et al. (US Patent No. 4451043).

3. Otten et al. reference discloses all inventions that are claimed in claims 1-17 and 20 in the current application with the exception of the following elements:

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- i. the exact positioning of the sensors,
- ii. mounting a polycarbonate lens over the sensors
- iii. the golf analyzer system including a rubber mat attached over an infrared sensor base
- iv. specifically stating the exact set of information to be calculated and displayed to the user,
- v. combining ultrasonic sensors with infrared sensors in analyzing a golf swing wherein certain infrared sensors automatically activates the ultrasonic sensors to produce signals when the golf club moves over the infrared sensors.

However, Otten et al. teaches the automatic activation of certain set of infrared sensors triggered by the movement of a golf club over a different set of infrared sensors (See Column 3 lines 63-67 and Column 4 lines 1-7). In regards to missing element (i), Otten et al. also teaches that the system is not limited to the configuration and positioning of the sensors shown in FIG 1-3. The arrangement could be designed in any number of configurations that intersects the swing path of the golf club (See Column 4 line 14-17). Moreover, in regards to element (iv), Otten et al. also teaches that various golf swing parameters can be calculated using the positioning and timing data of the club head measured by the sensors. For instance, swing path angle, club head speed, club head angle, club head lateral alignment, club head height and loft angle are all examples of parameters shown by Otten et al. that could be calculated and displayed to the user. Otten et al. further discloses that those skilled in the art of

computer programming will be able to create an application suitable enough to enable such data manipulation and display specific golf swing information to the user of the system (See Column 5 Paragraph 5 and Column 7 lines 30-50).

In a similar invention, Ogawa et al. reference discloses an electronic golf trainer device capable of analyzing a club swing using magnetic sensors. The reference discloses a sensor base where the sensors are located in a bushing lawn like area on a golf mat (See Column 27-28, FIG 1 element I). With a polycarbonate type material (missing element ii) mounted on top of the sensors. (See Column 2 lines 36-38, Column 3 lines 12-16). In regards to missing element (iii), it should be noted that it is well known in the art of mat making to make a golf mat with rubber like material. The reference further discloses that magnetic, infrared, and ultrasonic sensors are interchangeable for analyzing a club swing (See *Column 4 lines 31-36*). Therefore, it would have been obvious to one of ordinary skill in the sensing art at the time the invention was made to combine the two references and replace Otten et al.'s Infrared sensor base with an ultrasonic sensor base since infrared sensors are relatively expensive and may be inaccurate in certain ambient light conditions. Hence, replacement system would provide overall enhancement for the analyzation of the golf swing.

4. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otten et al. (US Patent No. 6821211) in view of Ogawa et al. (US Patent No. 4451043) as applied above, and further in view of McDevitt (US Patent No. 6500075). Otten et al. and Ogawa et al. references discloses all inventions that are claimed in the current application with the exception of attaching a stance base with two hinged boxes to a golf

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swing analyzer. However, McDevitt teaches a swing path alignment system with two grid surface hinged panels, wherein the width, length and height of the panels are design choices. Therefore, it would have been obvious to one of ordinary skill in the art to adapt McDevitt's swing path alignment system to the system taught by Otten et al. and Ogawa et al. to allow proper alignment of the golfer with the target line.

5. In regards to the infrared sensor coupled to a micro controller, Otten et al. discloses such coupling (See Paragraph 3 lines 8-16).

6. In regards to the golf swing analyzer system including an infrared filter, Otten et al. discloses a reflective tape that filters out unwanted lights when the golf club passes over the photo-detectors (see Column 7 lines 5-15). It should be noted that the reflective tape mentioned here is being viewed as the infrared filter.

7. In regards to claim 6, Otten et al. discloses the infrared sensor including an infrared emitter and an infrared photodiode detector.

### ***Response to Arguments***

8. Applicant's remarks, dated 1/16/2007, states that another copy of PTO 1449 was submitted. However, the Examiner was unable to locate the said new copy of PTO 1449.

9. Applicant's arguments filed 1/16/2007 have been fully considered but they are not persuasive.

10. Applicant argues, "Otten et al. provides similar information but uses IR sensors located on both sides of the golf ball. To insure that IR sensors detect the golf club movement, special reflective tape must be attached to the bottom surface of the golf

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club". The examiner respectfully disagrees. Otten et al.'s (Otten) sensor would still be able to detect the golf club movement without the reflective tape. For Otten's system will still recognize the movement of the golf club when it moves across the system, and the emitters/sensors will still be triggered to function when the golf club motion is detected. Otten's reflective tape is not to ensure that the golf club is moving. On the contrary, the tape is included to help filter artifacts or shadows when direct sunlight is present. Moreover, as shown above, Otten and Ogawa et al. ("Ogawa")'s combination disclose a system that doesn't require this reflective tape for filtering. The combination uses the polycarbonate material (which the examiner is interpreting as the lens) mounted on top of the sensors (Ogawa Column 2 lines 36-38).

11. Applicant further argues, "On Column 4, lines 8-17, the Examiner noted that Otten et al. stated that the IR arrays can be arranged in any number of configurations. In order to operated, the IR arrays must be arranged so that the golf club passes over the IR sensors located on opposite side of the ball and within the club's swing path". However, the examiner further notes that in order for applicants system to also operate, the club head has pass over the sensors (Plank page 2-3 paragraph 0033 lines 7-12).

Applicant further argues, "the Applicant stated two drawbacks regarding golf training devices found in the prior art that use only IR sensors. The Applicant submits that he was the first to discover these drawbacks and that no evidence has been presented that these drawback were known to others. Therefore, using the Applicant's comments as the basis for finding of obviousness is merely hindsight reasoning and long held to be improper. Absent any outside evidence that supports the belief that an

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ordinary individual would have known these drawbacks, no rational reasoning exists for using ultrasonic sensors in place of IR sensors". However, the examiner should definitely note that using ultra sonic sensors instead of infrared sensors in analyzing a golf swing has been well known in the art for sometime. As one can see in column 4 lines 31-36, Ogawa's reference itself disclose that the IR sensors are known in the art to be interchangeable with U/S sensors. It must be further noted that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

### **Conclusion**

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Omotosho whose telephone number is (571) 272-3106. The examiner can normally be reached on m-f 8-430.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on (571) 272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EO

*Emmanuel Omotosho*  
Primary Examiner  
2/17/07